Indiana ENERGY Association

1600 ONE AMERICAN SQUARE, BOX 82065 INDIANAPOLIS, INDIANA 46282 317-632-4406 FAX 317-262-4940 www.indianaengergy.org

March 15, 2019

Mr. Bruno L. Pigott
Commissioner
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue
Indianapolis, IN 46204

Re: Common Industry Position on the Federal Coal Combustion Residuals (CCR) Rule's Definition of "Infiltration" in the Closure-in-Place Performance Standard

Dear Commissioner Pigott:

The Indiana Energy Association and the Indiana Utility Group ("IUG")[1] hereby submits to the Indiana Department of Environmental Management ("IDEM") the enclosed white paper analyzing the meaning of the word "infiltration," as used in the CCR rule's closure-in-place performance standard at 40 C.F.R. § 257.102(d). It is our common industry position that IDEM's interpretation of "infiltration" represents a fundamental misunderstanding of the purpose of the closure-in-place performance standard and is inconsistent with the overall framework established under the CCR rule.

As a result, we respectfully request IDEM to reconsider its interpretation of "infiltration." We also ask IDEM adopt an approach consistent with the regulatory text and preamble guidance of the CCR rule explaining that the closure-in-place performance standard is intended to address the effectiveness, stability, and integrity of the final cover, not CCR beneath the cover that may be in contact with groundwater.

[1] The Indiana Energy Association ("IEA") and its members are the investor-owned electric utility companies operating in Indiana, including Duke Energy Indiana (a subsidiary of Duke Energy); Indiana & Michigan Power (a subsidiary of AEP); Indianapolis Power & Light (a subsidiary of AES); Northern Indiana Public Service Company (a subsidiary of NiSource); and Southern Indiana Gas & Electric Company. The Indiana Utility Group ("IUG") includes the Indiana-Kentucky Electric Corporation (IKEC), Hoosier Energy Rural Electric Cooperative, Inc., Wabash Valley Power Authority and Indiana Municipal Power Agency. Similar to the IEA, these companies operate in Indiana.

The IEA and the IUG appreciates the hard work that IDEM has undertaken with regard to this complicated issue. We are willing to answer any questions you may have regarding our enclosed white paper. If you are interested in meeting with representatives from IEA and IUG companies to discuss this matter further, please feel free to contact me.

Very Respectfully,

Timothy J. Rushenberg

Enclosure

Indiana ENERGY Association | OVEC/IKEC | HOOSIER ENERGY | Wabash Valley Power | IMPA

COMMON INDUSTRY POSITION ON THE FEDERAL COAL COMBUSION RESIDUALS (CCR) RULE'S DEFINITION OF "INFILTRATION" IN THE CLOSURE-IN-PLACE PERFORMANCE STANDARD

The Indiana Energy Association ("IEA") submits to the Indiana Department of Environmental Management ("IDEM") this white paper analyzing the meaning of the word "infiltration," as used in the CCR rule's closure-in-place performance standard at 40 C.F.R. § 257.102(d). A review of the regulatory text and preamble guidance explaining the closure-in-place requirements evince that the performance standard is intended to address the effectiveness, stability, and integrity of the final cover, not CCR beneath the cover that may be in contact with groundwater. CCR in contact with groundwater is an issue that is fully addressed under the rule's separate corrective action provisions. Moreover, EPA's December 2014 Human and Ecological Risk Assessment of Coal Combustion Residuals ("Risk Assessment") indicates that EPA intends for "infiltration" to address exclusively the post-closure passage of liquids through the top of the cap. Finally, recent statements in EPA's proposed Amendments to the National Minimum Criteria rule ("Proposed Phase 1 Amendments") demonstrate that the closure-in-place performance standard is intended to limit the infiltration of precipitation and surface drainage into the CCR underlying the cap, not the lateral migration of liquids from "any direction," as suggested by IDEM. IDEM's interpretation illustrates a fundamental misunderstanding of the purpose of the closure-in-place performance standard and is inconsistent with the overall framework established under the CCR rule.

The closure-in-place performance standard in its entirety makes clear that it is intended to ensure (i) against the infiltration of liquids *through the top* of the cap; (ii) the impoundment of liquids, sediment, and slurry *on top of* the cap; and (iii) the integrity of the final cover. As used in Section 257.102(d) and throughout the CCR rule, infiltration does not come from "any direction"; rather, it is limited to liquids passing through the top of the final cover. Specifically, paragraph (d)(1) sets out general requirements to address (i) infiltration of liquids *through the cap*, (ii) impoundment of liquids *on top of the cap*, and (iii) stability "of the final cover system"; paragraph (d)(2) details the actions owners and operators must take before installing the final cover; and paragraph (d)(3) establishes the precise technical design requirements to maintain the integrity of the final cover. Put simply, the closure-in-place performance standard is to be met through the performance of the final cover system. IDEM's position that this standard must address horizontal infiltration incorrectly reads the performance standard in isolation and not in coordination with the other regulatory requirements for closure in place in 40 C.F.R. 257.102(d).

Indeed, the performance standard does not address, much less preclude, CCR beneath the final cover from contacting groundwater once closure is complete. The fact that EPA provides detailed technical criteria in the rule to control, minimize, or eliminate infiltration from above, but says nothing whatsoever about lateral groundwater movement, demonstrates that EPA intended the term "infiltration" to refer only to the passage of precipitation and run-on through the final cover system. This interpretation is wholly consistent with IDEM's long-standing definition of "infiltration" posted on its Web site: "Flow of water from the land surface into the subsurface." *See* https://www.in.gov/idem/cleanwater/2469.htm.

In addition, on page 21413 of the preamble, EPA explains that Section 257.102(d)(1)(i)'s requirement to "control, minimize or eliminate, to the maximum extent practicable, post-closure infiltration of liquids into the waste" means that owners and operators should take into "account [] site conditions that may increase the likelihood that a cover would be susceptible to desiccation cracking or settlement cracking. Under this performance standard, if the cover system results in liquids infiltration or releases of leachate from the CCR unit, the final cover would not be an appropriate cover." This language exemplifies that the central focus of the closure-in-place performance standard is not on groundwater quality, but instead on the minimization of the post-closure infiltration of liquids through the top of the final cover, which could damage its effectiveness and integrity. Indeed, as EPA explains on page 35177

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of the proposed CCR rule, it was precisely the risk presented by "*continued infiltration of precipitation through inappropriately closed CCR impoundments*" that EPA sought to address when it proposed making CCR surface impoundments that stopped receiving new wastes before the effective date subject to the rule. This meaning of "infiltration" is confirmed by EPA's statement on page 11606 of its recent Phase 1, Part 1 proposal wherein the agency expounds that "[a] primary purpose of a final cover system is to encourage *free surface drainage* in order to limit infiltration from *precipitation* into *the underlying waste*." (Emphasis added.)

EPA's Risk Assessment, which characterized the risks associated with CCR disposal practices, further demonstrates that it is the post-closure infiltration of precipitation and surface run-on (not horizontal migration under the cap, which is nowhere addressed in the rule) that must be "control[led], minimize[d] or eliminate[d], to the maximum extent feasible." In Appendix K to the Risk Assessment, EPA specifically notes that "[t]he removal of free liquids and capping during closure reduces the hydraulic head and *the rate of contaminant migration*." EPA further explains that after closure is complete, "*infiltration through the impoundments is driven only by percolation of incident precipitation through the cap*." (Emphasis added.) The Risk Assessment reveals that EPA was well aware of the existence of CCR units with a portion of the ash in contact with groundwater; yet, it chose not to require closure by removal of these impoundments or to establish a set of performance standards specific to them. Instead, EPA designed the rule to address groundwater contamination under the rule's distinct corrective action provisions.

Moreover, interpreting the closure-in-place performance standard to require corrective action, *as part of the closure process*, for groundwater contamination resulting from horizontal infiltration into the unit inappropriately supplants the rule's separate and deliberative corrective action process with the rule's closure standards. This is an erroneous construction of the CCR rule. The rule's closure standards reside in a section of the rule that is entirely separate and distinct from its corrective action provisions. By interpreting Section 257.102(d) of the rule to provide standards to comply with corrective action, IDEM impermissibly supplants the step-wise decision-making process set out in Sections 257-96-.98 of the CCR rule, which requires impoundment owners to, among other things, assess the most feasible and effective corrective measures related to groundwater contamination; determine what measures meet the rule's strict standards; evaluate the long- and short-term effectiveness and protectiveness of various remedies; and consider the risks that might be posed to the community and the environment during implementation of a particular remedy, *including potential threats associated with excavation, transportation, and re-disposal of the CCR*. And critically, reading the corrective action process out of the CCR rule in the manner suggested by IDEM would deprive the public of its right to meaningful input prior to final remedy selection, which is directly contrary to Section 257.96(e) of the rule.

As the foregoing shows, the errors in IDEM's most recent interpretation are apparent when the CCR rule is considered in its entirety. Nevertheless, even if we assume that IDEM's reinterpretation of its website definition is correct, eliminating the hydraulic head by dewatering and capping the basin in accordance with the rule's closure-in-place performance standard will "control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere." Dewatering and capping removes the hydraulic head, resulting in a decline of the groundwater elevation at the base of the impoundment and a resulting significant reduction in horizontal infiltration due to the smaller area of impoundment-groundwater intersection. These actions reduce the potential for groundwater contamination to migrate beyond the boundaries of the unit. To the extent there is any residual groundwater contamination of Appendix IV constituents at statistically significant levels above the groundwater protection standards, such contamination will be appropriately addressed under the rule's separate corrective action program as part of post-closure care.

Indiana ENERGY Association
Indiana Energy Association
1600 One American Square
Indianapolis, Indiana 46282

Hand Delivered

Mr. Bruno L. Pigott
Commissioner
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue
Indianapolis, IN 46204